

Application No. 09/827,507
Amdt. Dated July 21, 2003
Reply to Office Action of January 23, 2003

Attorney Docket No. 81855.0008

REMARKS/ARGUMENTS

Minor changes are made to this specification. Claims 3 and 4 are canceled without prejudice. Claims 1, 5, 8-10 and 15-25 are amended. Claims 1-2 and 5-25 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention is a computerized method of monitoring the manufacturing status and history of a machine that is comprised of one or more components, wherein each component is to be incorporated at one or more production stations and is to be tested at one or more inspection stations. In the present invention, defect information for each one or more component is input into the memory at an inspecting station that is assigned an inspecting station identifier, and the defect information and the unit control identifier are linked to the inspecting station where the defect information is input. The stored unit control identifier and the stored machine number are then linked. Finally, defect information is output, including at least either the machine number and said unit control number, wherein the machine history in manufacturing is traced later.

The present invention provides more accurate and detailed information on the manufacturing status of production units, making it possible to track the manufacturing status of production units during manufacture in "real time" and corrective measures can be readily assigned to a responsible business function in real time. The present invention also provides real time component information, such as failure rates.

Claim Objections

Claims 17 and 19 stand objected to as referencing themselves. In response to the objection, claim 17 has been amended to depend from claim 16 and claim 19 has

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been amended to depend from claim 1. As such, neither claim 17 nor claim 19 now references itself. Withdrawal of the objection is respectfully requested.

The Office further states that "Applicant should amend claim 23 to depend from 22 (an not claim 21) if that is his intention." In response, Application has amended claim 23 to depend from claim 22 and not claim 21. Withdrawal of the objection is respectfully requested.

Claim Rejections— 35 U.S.C. § 112

Claims 8, 16, 22 and 23-25 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as his invention.

Claim 8 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as his invention, because the Office contends that it is unclear how the limitation "is replaced with said defective part corresponded to a replaced component" relates to the rest of the claim. In response, Applicant has amended claim 8 so that it is clear that the new component replaces another component "by implementation of said resolving method." Withdrawal of the rejection is respectfully requested.

Further, Applicant has identified no further rejections of Claim 8 in the Outstanding Office Action. Allowance of Claim 8 is respectfully requested.

Claim 16 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as his invention, because the Office contends that there is insufficient antecedent basis for the limitation "responsible business functions" in the original claim. The Office suggests that claim 16 should be amended to depend from claim 4. In response, Applicant has amended claim 16 such that it depends

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from amended claim 1 (which incorporates the limitations of claim 4). Withdrawal of the rejection is respectfully requested.

Claim 22 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as his invention, because the Office contends that there is insufficient antecedent basis for the limitation "said assembling stations" in line 8. The Office contends that this limitation should be amended to read "said production stations." Further, the Office contends that the word "units" in line 2 should be changed to "components" in order to remain consistent with the limitation in line 3. Further, the Office contends that the limitation "The method" in claim 1 should be changed to "A method." Applicant has amended claim 22 in the manner suggested except that "defect information" has replaced "result of inspection" to clarify the inputted information. Withdrawal of the rejection is respectfully requested.

Claims 22-25 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as his invention, because the Office contends that the limitation "said inputted" should be changed to "said inputted inspection information" since there are various other pieces of information being inputted in these claims. In response, Applicant has amended claims 22-25 in the manner suggested by the Office. Withdrawal of the rejection is respectfully requested.

Claim Rejections— 35 U.S.C. § 102

Claims 1-4, 9-18, 20, 22-25 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Thiel et al, U. S. Patent No. 6,381,509. Claim 1 has been amended to include the limitations of claims 3 and 4. Claims 3 and 4 have been cancelled without prejudice. Applicant respectfully traverses the rejection as to the amended claims.

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Claim 1 as amended is as follows:

1. (Original) A method of monitoring the manufacturing status of a machine comprising the steps of:

assigning a machine identifier to a machine comprised of one or more components, each one or more components to be incorporated into the machine at one or more production stations, wherein each one or more production stations is assigned a production station identifier;

inputting the machine identifier into at least one memory of a first computer;

inputting a unit control identifier for each one or more components wherein the unit control identifier is linked to the production station identifier where the unit control identifier is input;

inputting defect information for each one or more component into the memory at an inspecting station, wherein each inspecting station is assigned an inspecting station identifier, so that the defect information and the unit control identifier are linked to the inspecting station where the defect information is input and wherein the defect information includes at least one defect phenomenon.

linking the stored unit control identifier and the stored machine identifier; and

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outputting defect information which includes at least one of the machine identifier and the unit control identifier, wherein the machine history in manufacturing is traced later

inputting a business function identifier into the memory, wherein the business function identifier identifies the party responsible for resolving the at least one defect phenomena.

Applicant respectfully submits that Thiel et al. cannot anticipate the claimed invention because Thiel et al. fails to teach "inputting a business function identifier into the memory, wherein the business function identifier identifies the party responsible for resolving the at least one defect phenomena" as is required by amended claim 1.

Thiel et al. is directed to:

A computerized system for tracking the activities of a manufacturing system. Identifiers for parts, subassemblies or assemblies produced or used by the manufacturing system are generated and stored by a data processing system. The data processing system performs multi-level tracking of the manufacture of parts, subassemblies made from parts and assemblies made from parts and subassemblies, to facilitate detailed tracking and reconstruction of the manufacturing process and components of any assembly. The system also facilitates quality control; when a part identifier is read from the part, the system verifies that the part associated with the read identifier is supposed to be used in the manufacturing step. Also, the system ensures that all manufactured parts are tracked. The system also stores inspection and process conditions and facilitates statistical process control or statistical quality control data for parts, subassemblies and assemblies. The system can determine that an assembly has been produced by a

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manufacturing step when identifiers for all required parts identified in manufacturing data for the process step have been read and verified. Alternatively, upon detecting cycles of the manufacturing system indicative of completion of a manufacturing step, the system can determine that an assembly or part has been produced. In either case, the system generates an identifier for the part or assembly produced by the manufacturing step. (Thiel et al., Abstract)

Thiel et al. cannot anticipate the claimed invention because Thiel et al. fails to teach "inputting a business function identifier into the memory, wherein the business function identifier identifies the party responsible for resolving the at least one defect phenomena" as is required by amended claim 1. The Office cites Thiel et al. at col. 9, lines 62-67 and at col. 11, lines 6-12 for the proposition that this limitation is taught. However, Thiel et al. makes clear that where a defect is identified in Thiel et al. "a message is enqueued to one or more MIU's to display an error message, and at step 138, the production and process monitoring host 18 waits for automatic or manual intervention before preceding further" (Col. 9, lines 62-67) or "a message is enqueued to the MIU to display an error message, and thereafter in step 162 the production and process monitoring host 18 waits for automatic or manual intervention before proceeding further." (Col. 11, lines 9-12).

Thus, while the Automatic manufacturing system of Thiel et al. merely enqueues an error message and awaits for automatic or manual intervention before proceeding further, the manufacturing monitoring system of the present invention inputs a business function identifier into the memory which identifies the party responsible for resolving the at least one defect phenomena. Nothing in Thiel et al. teaches or suggests a manufacturing monitoring system which teaches such a construction. As such, withdrawal of the rejection and allowance of amended claim 1 is respectfully requested.

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Claims 2, 9-18 and 20 depend from claim 1 either directly or through intervening claims. As such, claims 2, 9-18 and 20 are patentable for at least the same reasons as

Claim 22 has been amended to include the limitation that requires "inputting a business function identifier into the memory, wherein the business function identifier identifies the party responsible for resolving the at least one defect phenomena." As such, amended claim 22 is allowable for at least the same reasons as amended claim 1. As such, claim 22 is patentable for at least the same reasons as claim 1. Withdrawal of the rejection and allowance of amended claim 22 is respectfully requested.

Claims 23-25 depend from claim 22 and are patentable for at least the same reasons as claim 22.

Claim Rejections— 35 U.S.C. § 103

Claims 5-7, 19 and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Thiel et al, U. S. Patent No. 6,381,509 as applied to claims 4 and 18 above and further in view of Official Notice. Claims 5-7, 19 and 21 each depend from amended claim 1 either directly or indirectly, and as such, are patentable for at least the same reasons as amended claim 1. Applicant notes that the assertions of which Official Notice have been taken do not cure the defects in the teachings that have already been identified with respect to claim 1. As such, withdrawal of the rejection and allowance of claims 5-7, 19 and 21 is respectfully requested.

Further with respect to claims 5-7, the Office states that "it is well known in the art initiate [*sic*] a corrective action when a defect is discovered in a manufacturing operation in order to prevent the product from being scrapped and to prevent the problem from recurring again." (Office Action, p. 6, para. 9). However, Applicant respectfully submits it is not obvious to initiate the corrective action in the manner claimed and the Office has failed to identify a manufacturing

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monitoring system in which the claimed method is used. As such, since the Art cited by the Office fails to teach or suggest each element of the claimed invention, the cited art cannot render the claimed invention obvious. Withdrawal of the rejection and allowance of claim 5 for this additional reason is respectfully requested.

Claims 6 and 7 depend from claim 5 and are patentable for this additional reason also. Withdrawal of the rejection for these additional reasons is respectfully requested.

The art made of record but not relied upon by the Examiner has been considered. However, it is submitted that this art neither describes nor suggests the presently claimed invention.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6810 to discuss the steps necessary for placing the application in condition for allowance.

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If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

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